

NATIONAL PARKS

MAGAZINE



40th Anniversary
National Parks Association
Founded 1919

February 1959

Fifty Cents

YOUR NPA IN ACTION

A "Sky-Post" for the Smokies

"The first point to be kept in mind then is the preservation and maintenance as exactly as is possible of the natural scenery; the restriction, that is to say, within the narrowest limits consistent with the necessary accommodation of visitors, of all artificial constructions and the prevention of all constructions markedly inharmonious with the scenery or which would unnecessarily obscure, distort, or detract from the dignity of the scenery.

"... it is important that it be remembered that in permitting the sacrifice of anything that would be of the slightest value to future visitors to the convenience, bad taste, playfulness, carelessness, or wanton destructiveness of present visitors, we probably yield in each case the interest of uncounted millions to the selfishness of a few individuals."

—Frederick Law Olmsted, 1865.

The award of a \$57,000 contract for "construction of a unique 'sky-post' observation tower" in Great Smoky Mountains National Park, Tennessee-North Carolina, was announced on December 10, 1958 by the National Park Service. The 45-foot-high reinforced concrete tower will be located atop 6643-foot Clingman's Dome and will constitute—according to the Service news release—the highest viewpoint on the 2000-mile Appalachian Trail running from Maine to Georgia.

Your National Parks Association has written a strong letter of objection to this project. (See inside back cover.) What the Park Service news release calls "sweeping, free-flowing lines of contemporary architecture," your Association has termed "flashy," "urban in conception" and expressive of the age of "technical power on the loose." (See drawing below.) The 375-foot-long, six-foot-wide approach ramp which circles upward from a circular flagstone entrance area in what the Service calls a "graceful, graded spiral," reminds your Association of a "roller coaster at a commercial playground." Park Service spokesmen indicate the length of this ramp is necessary to hold the gradient

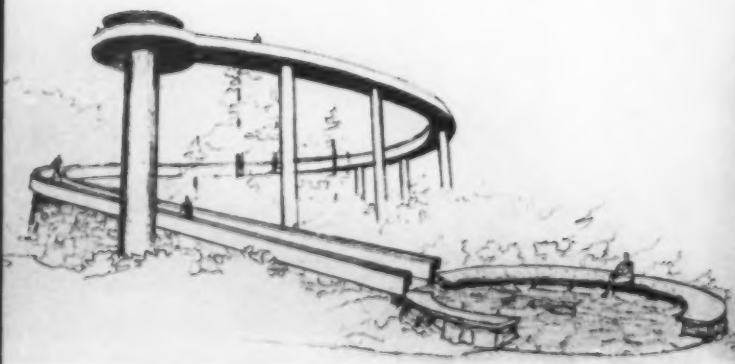
of the ramp to 12 percent. The Service justifies this gradient by such considerations as making it easier for people to climb the 45-foot height; moving more people up and down faster; decreasing the danger of falling down stairs; and making it possible for visitors to enjoy the view as they move up and down.

Director Conrad L. Wirth of the National Park Service has stated that the new tower was included in Mission 66 "as a necessary replacement for the old wooden tower dismantled in 1950 that had been considered one of the finest viewpoints in the park."

Your Association does not feel that construction of this tower complies with Mr. Olmsted's suggested restrictions of all artificial constructions "within the narrowest limits consistent with the necessary accommodation of visitors." Neither do we believe that the proposed structure would be in keeping with the spirit of his advice regarding the "prevention of all constructions markedly inharmonious with the scenery or which would unnecessarily obscure, distort or detract from the dignity of the scenery." Our letter to Director Wirth is found on the inside back cover.

An architect's drawing (left) of the 45-foot-high observation tower and its 375-foot-long approach ramp planned for construction on Clingman's Dome in Great Smoky Mountains National Park, North Carolina-Tennessee in 1959. At right is a view from the Clingman's Dome road showing the type of forest cover and topography encountered in the park.

National Park Service photographs



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ON THE COVER

Caught at the height of its spectacular display is Great Fountain Geyser in the lower geyser basin of Yellowstone National Park, Wyoming. Unlike the better known Old Faithful, a cone- or nozzle-type geyser in the upper basin which plays fairly regularly every sixty-six minutes, the eruptions of this beautiful fountain-type geyser occur at intervals of from eight to fifteen hours. Once it begins, however, it lasts from 45 to 75 minutes in contrast with the four-minute duration of Old Faithful.—Photograph by Franz Lipp.

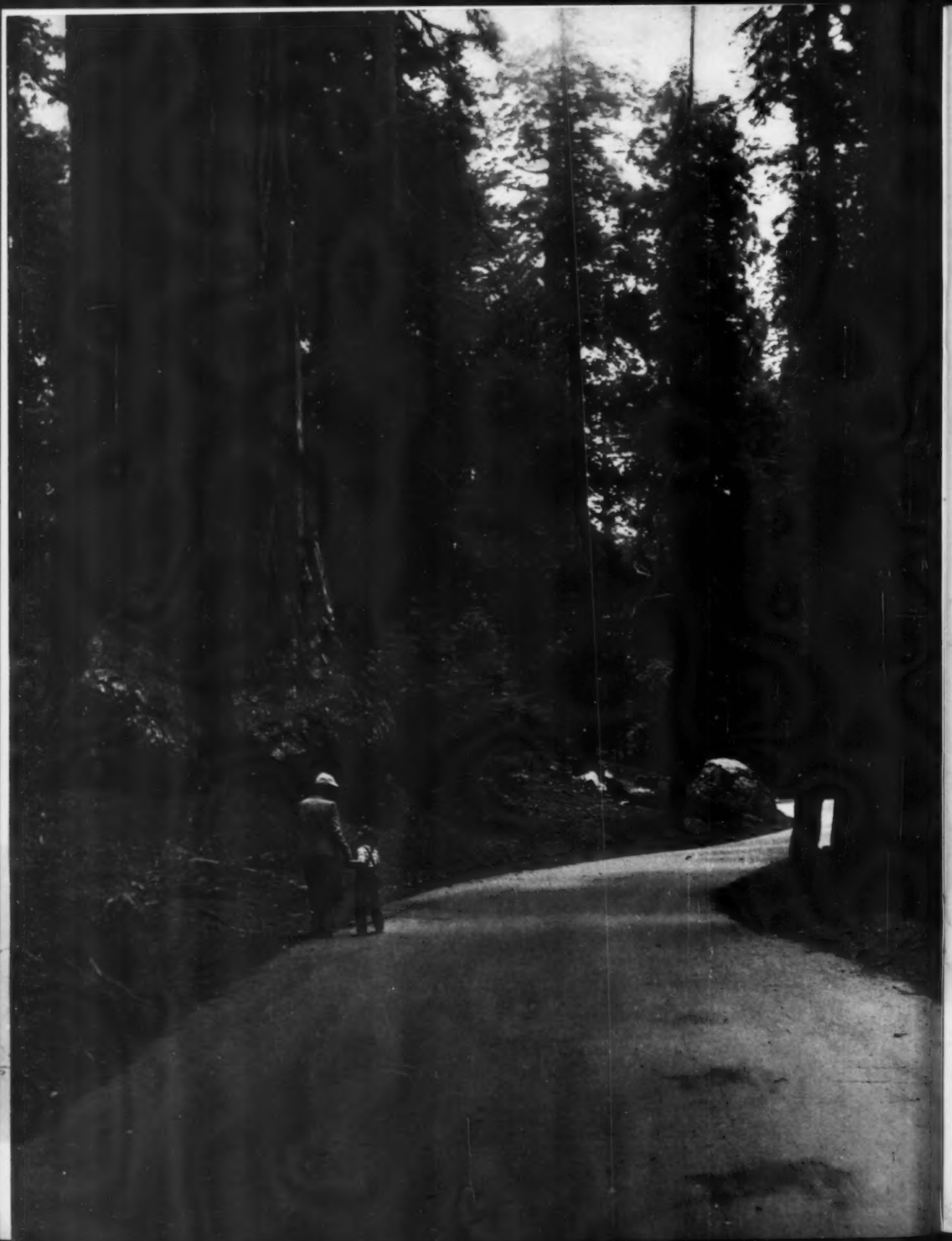
THE NATIONAL PARKS AND YOU

Few people realize that ever since the first national parks and monuments were established, various commercial interests have been trying to invade them for personal gain. The national parks and monuments were not intended for such purposes. They are established as inviolate nature sanctuaries to preserve permanently outstanding examples of the once primeval continent, with no marring of landscapes except for reasonable access by road and trail, and facilities for visitor comfort. The Association, since its founding in 1919, has worked to create an ever-growing informed public on this matter in defense of the parks.

The Board of Trustees urges you to help protect this magnificent national heritage by joining forces with the Association now. As a member you will be kept informed, through NATIONAL PARKS MAGAZINE, on current threats and other park matters, so that you may take action when necessary.

Dues are \$3 annual, \$5 supporting, \$10 sustaining, \$25 contributing, \$100 life with no further dues, and \$1000 patron with no further dues. Bequests, too, are needed to help carry on this park protection work. Dues, contributions and bequests are deductible from your federal taxable income. Send your check today, or write for further information, to the National Parks Association, 2000 P Street, N.W., Washington 6, D.C.

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Roads in Our National Parks

Harold Bradley

WHEN Colonel John White was Superintendent of Sequoia National Park, he decided that a slight widening of the old road between Giant Forest Village and Moro Rock was needed. An appropriation was secured and the Bureau of Public Roads developed the plans—quite different from what the Superintendent had ordered.

The narrow old road which wound with great charm through undisturbed forest, much as a trail might wind, was to be abandoned. The proposed new road was to be straight, wide and fast. It would cut a straight swath through the forest to the Rock, thereby shortening the distance considerably. It also would cut across one of the lush, flower-decked meadows of the region, Crescent Meadow, to which people seeking solitude could easily go by trail.

Colonel White recalls getting out his biggest pencil and writing "Disapproved" across the blueprints. Thereby he lost his appropriation and the widening he desired for the old road. But he saved his park from unnecessary damage.

The Regional Chief of the Bureau of

Public Roads was naturally much incensed and called John an "obstructionist." "That's the finest compliment I ever got," was his gleeful comment. Some years later he obtained sufficient funds to widen the old road about two feet, cutting no trees, and making no new scars—which was what he wanted and all that was necessary to carry the traffic comfortably, then and now.

When the General's Highway was being built to connect Giant Forest and Grant's Grove, our family's base camp was located near the construction zone, and so an opportunity was presented to talk park roads frequently with Colonel White, and to note the care with which he supervised this one. He was at the construction point every day and for many hours, supervising the laying out of the road on the ground. The office work he could delegate to his assistants; the road itself, which he considered the most important problem affecting his park at the time, required his personal attention.

He expressed the highest respect for the skill and engineering ability of the highway engineers, but his comment

Harold Bradley is in his second term as president of the Sierra Club. He is known to Association members through his previous articles on national park subjects—including *Our Mission for the Parks* in our July-September 1958 issue. A professor emeritus of physiological chemistry, University of Wisconsin, he has been concerned with national park road standards for over a decade.

was, "No engineer who has not grown up in the parks can be trusted to build a park road." The result of this meticulous care by the man responsible to the Service and the public for the preservation of the park is that the General's Highway is still referred to by some conservationists as a good example of what a park road should be.

Do we still have superintendents in the Park Service with the sensitivity and the courage of John White? Do they have final authority over the details of routing and the standards to be used in road construction in their parks? Do they supervise construction on the ground, or is this responsibility delegated, and to whom? Do the highway engineers—committed unyield-

AT LEFT, the Moro Rock road in Sequoia National Park, California, remains a good park road because of the sensitivity of former Superintendent White. In contrast, a junction on the realigned South Rim road at Grand Canyon, Arizona (below) reflects freeway thinking. All photographs by the author.





Highway 50, near Altamont, California, is functionally perfect, straight and stark. Designed to carry traffic at high speed, contours are of no moment. It doesn't go around hills, but through them—an engineer's miracle for flat-land travel. If the Park Service wants roads with such freeway ideals in our national parks, we, the owners and the source of Service salaries should know it.

Efficiency and Speed

Another flat-land miracle in Yosemite National Park, California. While the road could have followed the pleasant curve of the forest to the right and remained invisible, it cuts instead straight across a lovely meadow on the Valley floor. Easier to build perhaps; a little cheaper; shorter by a hundred yards; faster by twenty seconds. Of what use a meadow—the cattle have been moved out?



ingly to their own standards in which preservation of the natural scene is not a factor—have the final decision as to details of where the road should go and how?

These are some of the questions which have been raised by the Grand Canyon South Rim road, and the incomprehensible treatment of the delicate beauty of the Tenaya basin along the new Tioga Road in Yosemite, and for which we do not have clear answers at this writing. (See *Yosemite 1958—Compromise in Action* in the October-December 1958 NATIONAL PARKS MAGAZINE and *Tenaya Tragedy* in the November 1958 *Sierra Club Bulletin*.) It is clear, however, that the rush to complete the Mission 66 program of realigning old roads and constructing new roads carries with it the disturbing threat of irreparable damage to our national parks.

Along the coast of California southward from Monterey runs the famous "Seventeen Mile Drive," a private toll road through park-like estates where glimpses of coves, rocky headlands, and the gleaming spray of Pacific rollers come into view. Originally it was a buggy track winding its way between trees and dunes and rocky outcrops. Its cost was little more than that of careful driving.

Eventually when the automobile came, the road was surfaced with black-top just enough to permit cars to pass at cautious speed. Turnouts at convenient intervals make it possible to pull off to watch the water birds, the seals, or the breakers crashing against the rocks. Of modern standards the road has none. It was literally "laid on the land" like unwinding a strip of carpet, with the natural rolls and dips of the land unchanged.

The road is practically all in curves, some sharp and blind. In forested stretches there may be no cut-back and no shoulders. Trees rise from the very edge of the pavement. One drives at the leisurely pace the road itself imposes, and accidents seldom occur at twenty miles an hour! While the standards of the road are admittedly poor, it is rich in charm. In spite of the fact that its scenic displays are almost commonplace along the coast, in spite of the dollar fee imposed, in spite of its lack of standards, it carries a heavy

load of visitors who come from all over the country to drive and enjoy it.

Rock Creek Park in Washington, D. C., Central Park in New York City, and Golden Gate Park in San Francisco are well-known examples of urban parks having great beauty and popular appeal. All are man made. All were laid out on land essentially flat, surrounded by the characteristic rectangular grid of efficient city streets. As one enters these parks, the scene and the mood undergo a complete change. With this change, and helping to achieve it, is the road pattern. There are few straight lines; the roads are laid out in sweeping curves to present the beautiful park landscaping.

Efficiency of moving traffic at high speeds and low construction costs which straight lines would have provided were not considered important by the distinguished artists who designed these parks. The curves were not dictated by the terrain itself; they were consciously and carefully introduced by those who planned them to provide the changing vistas, the sense of continuously exploring the unknown around the next bend, the automatic reduction of tempo which the park designers intended. The visitor is invited to see and to enjoy the charm provided in an atmosphere of unhurried relaxation.

There are great differences, of course, between the urban parks mentioned, the private parks, and the great primeval scenic areas in our national park system. The fundamental purposes, however, are the same—to provide people who seek it a change of mood and scene. The law which creates a national park provides that it be kept in its natural state in perpetuity, or as nearly so as is consistent with making it accessible to visitors.

The major function of the park road is display while at the same time providing for the general needs of park traffic and administration. This imposes great restraint in the routing and design of park roads—roads which should contribute to the superlative experience which the park can provide while entailing the least possible disturbance to the natural scene and the least distraction from it.

It is this sharply restricted nature of the national park which distinguishes



The famous Seventeen-Mile Drive through park-like estates along the California coast was literally "laid on the land" with natural rolls and dips unchanged. The road is all in curves, some sharp and blind, and forested stretches have no cut-back and no shoulders. Yet it carries a heavy load of visitors who come from all over the country to drive and enjoy its leisurely pace and its views.

A Leisurely Display Road

Golden Gate Park in San Francisco, California is a man-made park—laid out on land essentially flat. Efficiency of moving traffic at high speeds and low costs which straight lines might provide were not considered important by the distinguished artists who designed these parks. The character of the road (below) invites the visitor "to see and enjoy the charm provided in an atmosphere of unhurried relaxation."



it and relates it most closely to such institutions as the public library, the art gallery, and the museum. Indeed, a national park is an out-of-doors synthesis of these on a grand scale where priceless scenic gems are made available for public enjoyment, but where such enjoyment must always be kept consistent with preservation of the scene which the visitor has presumably come to see.

The fullest park experience comes to those who travel the forests and the mountains afoot by trail. Nothing can equal the richness which this mode of travel offers. Nothing can equal the intimacy, the sense of being a living part of the park and not just a spectator, which going afoot provides. But for those who cannot go this way and who must find their understanding and inspiration from the automobile, the park road which most closely approximates a *motor-trail* is the ideal solution.

Fortunately there are still such roads. Their qualities can be studied and described both in everyday terms and in terms of engineering standards. They must, of course, be well built for long life and minimal maintenance costs. They must be safe, and they should provide something of the intimacy which is so fundamental a characteristic of the foot trail. To be safe, they must be relatively slow; to be intimate, they must be relatively narrow. High speeds are out of place in mountainous park terrain and contribute the element of hazard, while wiping out or blurring the sense of intimacy.

A good park road might, therefore, have a surface width of 18 to 20 feet, as narrow as is consistent with safety in passing at cautious speeds. Driving speed should be low—an average of 30 mph, which implies variations of from 15 to 40 mph. (The foot traveler averages about three mph with variations of from one and one-half to five, depending on whether he is climbing or swinging along downhill.) Shoulders must be of variable width but narrow enough to allow the trees and the forest understory of brush, ferns, and flowers to remain close to the roadside, and forest cut-back should be avoided or minimized.

With reasonable allowance for the higher speed of the automobile, the

park road—like a foot trail—should be “laid on the ground.” It will nearly always be a curving road which provides the element of charm, constantly changing vistas, a wide-awake sense of anticipation for what may be disclosed as the turn is rounded, an automatic restraint of speed. Such a road does the least damage to the terrain and is the most economical to build.

Straight lines are foreign to the mountain scene and the road should not introduce them except where it does so with no significant alteration of the scene. Curves should be fitted to the ground—some of them widely sweeping with long visibility ahead, others relative “tight.” Signs should warn the driver when a change in speed is essential for safety.

Gradients should be flexible. A uniform gradient is natural in flat lands but as foreign to mountain country as are straight lines or high speeds. As long as rolls and dips are not severe enough to produce real hazards at the expected speed, they should not be avoided. A park road need not be made monotonous!

Frequent turn-outs should invite the motorist to pull off, to investigate a stream, a meadow, a fine grove of trees, or to study the view. The final objective of such a road is to provide leisurely passage through the park, freedom from the sense of hurry or the distraction of 50-60 mph speed, an intimate chance to view park detail, an opportunity to quietly contemplate and absorb the grandeur which presents itself from time to time. Emphasis must be placed heavily on the word *leisurely*—since that also provides safety and minimizes damage.

The engineering standards for this type of road are excellently set forth in the National Park Service document, “Handbook of Standards for National Park and Parkway Roads,” made public in November 1958. The preamble, written by Director Wirth, reads as follows:

This *Handbook* is intended to be used as a guide by those who are responsible for the locating, designing and building of park and parkway roads.

The purpose of roads in units of the national park system is to give the public reasonable and leisurely access to scenic and other features. Such roads shall be located, designed and constructed with

this in mind. Thus they become principal facilities for presenting and interpreting the inspirational values of a park, monument or parkway.

In the location, design and construction stages, the alignment, grade and cross section of all park and parkway roads shall be fitted to the terrain as closely as possible to preserve the landscape. Pavement, shoulder widths and curvature should be adequate for the leisurely traveler and turnouts and parking overlooks shall be provided at frequent intervals. In all phases of the work the landscape architect and the highway engineer shall exercise imagination, ingenuity, and restraint to conserve park values.

In the document are these significant figures for Classes 1 and 2 twenty-foot surface roads in *mountainous topography* (emphasis supplied): Maximum design speed, 30 mph; steepest allowable grade, 12 percent; minimum stopping-sight distance, 200 feet; sharpest curve, 160-foot radius.

These are the minimum standards and provide tremendous flexibility of application. A curve, for example, *may* be constructed as tightly as a 160-foot radius provides, *but* the radius *may* be 400 feet or half a mile or infinity in the discretion of the engineer. It is only fair for us to assume that the curve chosen should provide the closest fit to the land and, therefore, do the least damage to it. The objective, implicit in the preamble, is that the construction will indeed provide a “leisurely” safe road of the type we have called a motor-trail, doing the least land disturbance, and providing intimate contact with scenic display. The weakness in the published standards lies in the lack of explicit *requirement* that standards appropriate to realizing these objectives *must* be chosen.

The needless wreckage in the delicate and uniquely beautiful little valley of Tenaya Lake must be attributed to the fact that “highway” thinking prevented an application of standards which could have spared this damage—or that this area was not considered to be “mountainous topography”!

Nothing now can save Tenaya basin. Conservationists and enlightened public opinion will be needed to prevent similar failures in the application of permissible standards in many of the other construction projects envisioned in Mission 66. ■



Bighorns of Rocky Mountain

Roger Contor

MANY times each year in Rocky Mountain National Park serious looking visitors ask, "where might we find bighorn sheep?" These are seasoned devotees of the national parks. Among them are naturalists, photographers, biologists and artists. They have travelled great distances in hopes of seeing one of the rare and fascinating wild animals of our country—a superlative in the world of nature.

No wild animal in the United States is more highly esteemed by the wilderness wanderer or anyone interested in the faunal treasures of our national parks. Nor is any species so typically a part of our remaining areas of primitive, rugged wilderness as the wild mountain sheep.

Our admiration for the bighorn is certainly linked with a fondness for its inaccessible environment of Elysian beauty—of cloudswept peaks and snow-fed, timberline gardens. It must also result from mystery and beauty of the animals themselves—the unmistakable dignity of bearing so clearly portrayed

in the condescending, steady-eyed gaze of a free-ranging, wild ram. A great part of it may also lie, not with the character of the sheep or their enchanting environment, but in our own emotions as we watch with regret the inexorable decline of a fine species that apparently can only retreat before a changing world.

Fortunately, a few of our national parks host fair-sized herds of native bighorns. Among them are Glacier, which harbors approximately 170, Yellowstone 200, and Rocky Mountain, by recent census, about 210. In each case these herds represent remnants of many thousands of wild sheep which formerly roamed the foothills, canyons and high plateaus of the West. Near the close of the 1800's, market hunting, settlers and disease had almost wiped them out. Rigid protection was introduced in time to save a few survivors for today's back-country visitors to watch for and enjoy.

Through 1957 and 1958, I hiked and skied the high ranges of Rocky Moun-

tain Park, making a survey of the bighorn population. The objective was to evaluate the current population and make general notes on trends and conditions. Admittedly, most of the field trips were enjoyable. They lead into forgotten valleys and remote ranges of one of our finer national parks. They retraced (in part) the steps of Enos Mills, Joseph Dixon, Fred Packard and many others who intimately knew the sheep of Rocky Mountain.

The first encounter in this survey was the closest I ever expect to have with a wild bighorn. It occurred in March during a snow-survey trip to Milner Pass. I had skied to the top of Sheep Rock and flushed a lone, full-curl ram down into the cliffs on the

No wild animal in the United States is more highly esteemed by the outdoor visitor than the bighorn sheep. Nor is any species so typically a part of our remaining areas of primitive, rugged wilderness.

A. Schlechten, U. S. Fish and Wildlife Service



north side. I clumsily clattered along behind him, carrying my skis over the rocks, hoping to get a better look.

As I rounded a steep rocky ledge, I looked up at a most astounding sight. The ram was perched like an eagle atop a jagged thumb of rock, silhouetted against the sky not forty feet away. I can still remember the rich chocolate brown of his neck and brisket blending into the grey buff of his body. He nervously stamped his feet on the pinnacle and snorted at the discomfort of being cornered. Skis and poles in one hand, I hurriedly tried to get my camera into action with the other.

Evidently this was too much. I had blocked off the only route of escape and now was menacing his dignity with a camera. Half pivoting, as if hoping to find some other way out, he leaped off the rock toward me. In surprised shock I watched him bound toward me, then unconsciously ducked to the right as far as I could. The ram flashed by no more than a yard away. Too late, I freed the camera and got a shaky photo of sheep rump and snowflakes.

Of course, one doesn't necessarily have to make a 2000-foot climb on skis to see sheep. Rocky Mountain is one of the few places where a park visitor can frequently see wild bighorns from a major park road. This occurs at Sheep Lake in Horseshoe Park. About ten to fifteen times each year, between February and September, the sheep of Chapin Mountain journey to the lowlands to use the natural mineral licks. Ignoring onlooking visitors, they stalk boldly across the paved road to feed avidly on the muds of the brackish potholes while fortunate photographers snap excitedly away not one hundred feet distant.

Occasionally in the summer, sheep are also seen near the road at Poudre Lake and Milner Pass, at the crest of

the Continental Divide. From this same location during the first week in June, from a half dozen to forty ewes and lambs can usually be seen with binoculars in the early morning, feeding on the tundra slopes of Specimen Mountain. The small new lambs are charming to watch in the June sunshine.

For those who are able to seek bighorns in wilder places, beyond the sound of cars and people, nothing is more inviting than a hike into the remote Never Summer Range in the northwest corner of the Park. Over one hundred bighorns inhabit this relatively compact range of brightly colored volcanic peaks. Almost any part of it you care to ascend may take you within sight of a band of sheep.

It was in the Never Summers that I was fortunate in seeing six mature rams battling. Although it was near the first of October, two months prior to the actual mating season, their enthusiasm for fighting was not at all subdued. From a vantage point less than two hundred yards away, I watched the whole affair with binoculars. It was a grand show, the most rewarding experience of the many hours spent in the survey.

I had been observing a band of nine rams feeding along a ridge at timberline. They were a hundred yards or so above a group of twenty-seven ewes and lambs which was accompanied by a very old ram and a two-year-old ram. With no warning, two of the larger rams on the ridge squared off, raised slightly on their hind legs, and met head-on in a violent downward crash of their horns. They recoiled, backed off a step or two, and stood facing each other. The impact apparently did not daze them.

Before they could collide again, four other large rams (three of them with full-curl horns) eagerly trotted up to the combatants to join in the fun. Among them was a splendid, dark-colored colossus of the so-called "blue" or "black" color variety which sometimes occurs in bighorns. His horns were evenly matched, the tips protruding at least two inches above the bridge of his nose.

The intruders approached in a quaint, stiff-legged trot, with necks outstretched and heads canted to one side. In a moment a general "free for all"

ensued. For thirty minutes the six of them intermittently battered each other back and forth in apparent delight.

As often as not, two or three of them would stand leaning against each other, facing opposite directions, striking each other in the body. In this type of sparring, the blow is generally summoned from the neck and shoulders; the entire weight of the body is not thrown into it as in the head-on encounter.

Periodically a neutral animal would catch another off guard with a thumping blow to the rear quarters. Then the



two would square off, rise up on their front toes, and try their best to cudgel their brains out.

The drama of these encounters has been described by people who have witnessed hundreds of such battles. The sound of their crashing horns has been likened to many things. I can only add that a ram in the prime of life seems to like to fight, and is wonderfully equipped to deliver and withstand unbelievable punishment. The sound of the head-on blows reminded me more than anything else of a large rock striking another.

An interesting side light was the action of the other sheep feeding below. The ewes continued to graze placidly, as did the two rams with them. But



some of the lambs, then four months old, displayed considerable excitement and dashed about, bucking and kicking and butting their heads.

Another game the lambs often play is sort of a "follow the leader" routine. In this they dash recklessly in single file up, down, around and across the faces of steep rocks and cliffs. When the leader stops, another starts off, and with complete abandon they all charge away in another direction.

Their tiny hooves do not always seek the minute crevices for footholds, as is commonly supposed. A great deal



of traction is dependent purely upon friction contact of hoof and rock, stabilized by the forward momentum of their bodies. A lamb, or any sheep, will dash quickly across a steep-angled slab of schist, hooves slipping downward one to three feet at each leap, without any noticeable concern. Though their movements often involve great speed in treacherous terrain, they apparently never lose control.

While the bighorns of Yellowstone spend a large part of the year at elevations around 6000 feet, and those of Glacier even lower, the sheep in Rocky Mountain are truly high-country animals. Many of them are born, live and die without ever wandering below 9000 feet elevation.

Even in winter they feed at elevations up to 12,000 feet on the grassy ridges swept bare of snow by the raw, blustery winds. Some find shelter in the lee of rock promontories, or caves. Others lie out in the open, protected only by the thick hairy mat of their coats. So effective is the coat of guard hair combined with an under layer of fine wool that their body heat usually fails to melt the snow that falls on them.

Getting photographs of these creatures is an interesting challenge. Even though they are one of the easiest wild animals to approach (surprising as that may sound), the opportunities for good shots do not come fast and furious. When conditions are right, however, they can be very cooperative subjects.

If the photographer does not walk abruptly up to the herd the instant they are spotted, he has a better chance. One should take ten or twenty minutes to cover the last two hundred yards. Never walk directly toward them or show any concentrated interest in their direction. Walk in a zig-zag course, scratch around on the ground, stare at another mountain . . . this is also a good time to get an exposure meter reading and check the settings on your camera. Take the reading off a rock or patch of grass. Try to ignore the sheep; by and by they will be watching your movements with interest and accept you as a neutral. If they are a wild, isolated group, they may even walk closer out of curiosity. Their sense of smell is not keen, particularly in dry weather, but it doesn't hurt to stay downwind if you can. Above all, *stay in sight*.

To sheep, danger is what cannot be seen. The best way to end up with less than a good look at them is to try stealth. Only rarely can a person successfully sneak up close to a bighorn. As soon as you move out of sight the quarry becomes nervous and leaves in high gear.

But whether you are a photographer, painter or just a person who enjoys nature, take a jaunt into the bighorn's domain. Even if you find only their trail threading among the crags, you will taste of a memorable atmosphere.

We enjoy our wild native bighorns for many reasons. And we are closely concerned with their future. They are not doing as well as we would like.



Since Fred Packard's 1939 census, the sheep of Rocky Mountain National Park have decreased from a herd of about 329 animals to one of about 210. In the early 1920's there were believed to be about 1000 in the Park. Why do they continue to decline under careful protection?

Basically, three known conditions would seem to combine against them:

1. One of the problems is range restriction, the isolation of a once migratory animal from its former wintering ground in the fertile foothill country. This is generally true of other areas in the Rocky Mountains.

2. Part of the trouble is in three chronic pathological factors which apparently kill sheep steadily—lungworms, coccidiosis and an hemorrhagic septicemia. Domestic sheep may have introduced part of these within the past seventy-five years. The heavy loss of lambs, the greatest single reason the herds do not increase, is generally thought to be the result of one of these lethal conditions.

3. And here, as in Yellowstone, winter forage competition with elk, particularly in the high country, is a detriment to the welfare of the bighorns. The elk increase; the sheep do not. The bighorn herds of the eastern slope of the park—those which have been subjected to the greatest forage competition—have decreased 78 percent in the last 19 years. This problem is now being corrected through management.

The problem of preserving the sheep is complicated and subject to many adverse factors, but with continued study it can be solved. If so, a visitor in the distant future may still see a ram on the skyline, or watch a string of lambs scamper up a cliff. That visitor will also know why national parks exist, and why we have salvaged a spectacular fragment of our wildlife. ■



Bearberry Ledge

Sigurd F. Olson

CAMP sites in the north are chosen for the things you can see at a distance, a landing for the canoe and outfit and a place for the tent. But they are loved and remembered for the things you cannot see. Not until you have gone ashore and been there a while do these other values make themselves known; not until the furor of pitching camp is through and supper well under way is there any awareness of the subtle undertones of any place. Only then, when there is nothing more to do than tend the fire or look to the horizons, do the permanent values grow into one's consciousness.

At the end of any trip when the country as a whole is a grand panorama of lakes and portages, of rapids and falls, of storms and quiet, and constantly shifting vistas that all seem to merge into one, it is certain campsites, what happened there and how they made you feel, that stand out more clearly than the rest. Most vivid of all are the new ones, those you carved out of the bush and where no one had

Widely known in many fields of endeavor related to park and wilderness conservation, Sigurd F. Olson is best known to our readers as President of the National Parks Association. "Bearberry Ledge" is a chapter from his newly published book *Listening Point* and is used here by special permission of publisher Alfred A. Knopf, Inc. This article is Copyright 1958 by Sigurd F. Olson. The illustration is by Francis Lee Jaques.

ever camped before. All discoveries there seem important—the actual location of the fireplace and the tent, silhouettes of certain rocks and trees, the way the water swirled in an eddy, how a moose sloshed into a bay and stood there undisturbed.

And so when the time came to spend our first night on the point, to dedicate the bearberry ledge, the composite of all the camp sites we had known, knowing these things, we were expectant and aware. Conditions must be ideal for our first night out, for we would return again and again and build upon what we had found there. While as old voya-

geurs we could enjoy it in the rain or in the teeth of a gale, this time we wanted a combination of all the best that could happen. We had a choice, could pick the perfect night, wait if necessary and plan our expedition so that everything we dreamed of might be there.

So we chose a time of the full moon, a soft evening when it would come up orange and mellow over the little bay and the black ridges behind the beach. We wanted a sunset too, and that meant wisps of clouds and possibly a thunderhead for grandeur. It should be a night alone so we could go without a word to absorb the feelings that were there.

The first night of the full moon was against us, for in the afternoon a strong wind whipped out of the north and the sky was suddenly full of angry scudding clouds. The second was ideal and we made swift preparations to go, packed the sleeping-bags, the tent, some coffee and tea and something for supper and breakfast. But just as we were ready to take off, the house filled with guests and the bearberry patch was forgotten.

The third night and the last when the moon was really full, we were alone. There were wisps of clouds in the west, a few high cumulus peaks above them and a soft zephyr of a breeze out of the south. The paddle down was quiet as a prayer, reflections rode the shorelines, and rocky points lay like giant spears along the water. Where we passed the birches, they shimmered and shook as the ripples of the canoe went over them. A seagull sitting out in the open seemed twice as large as it should be; it floated on the surface like a patch of foam. We passed the narrows at Gregories, Dollar Island, and Kaleva Bay, and there just a mile away lay the point, its smooth gray finger of rock with its fringe of little pines waiting our invasion.

Even at a distance I would have picked such a spot and paddled far out of my way to reach it. But this time we knew what was there. All we didn't know were the things the night could give, sights and sounds and smells that are only known when one sleeps out of doors. The sun was already low, and in the open reaches the color was beginning to show.

We landed the canoe on the smooth flat rock and carried the packs to the place where the bearberry laid in a tightly packed mat over the ledge, the same resilient cover one finds clear to the Arctic Circle and beyond. The hard little stems with their tiny oval leaves were interlaced so tightly that the ground beneath could not be seen. No sticks, pine needles or dust lay upon it. It was fresh, wind-blown and clean, a proper place for a night as important as this.

Because it was clear we did not pitch the tent, just laid it on the ground and placed our bags on top as we had done many times in the past. There might be dew, but this night we wanted the stars and the moonlight. It was very quiet there, and suddenly we realized not a word had been spoken since we landed. The point was as hushed and undisturbed as though we had paddled all day and were far to the north.

We built a small fireplace at the very tip of the point, kindled a blaze with a handful of pine needles and put the kettle on to boil. When the fire was a bed of coals, we broiled our steaks until they were done.

After supper we paddled off into the darkening cluster of islands, slipped into rocky channels colored with the sunset glow, drifted between them as lost to the sounds of the world as we had ever been. We caught a couple of small bass as we paddled along and a great northern too, which we released. The bass were enough for breakfast.

We passed several round glaciated knobs covered with caribou moss and stopped before a slender ridge of an island with a boulder big as a house tucked into a stand of Norway Pine. The last rays of the sunset tinted the great boles of the trees and made them glow with fire. To that boulder the trees were as grass. It lay among them huge and gray and permanent, had been there thousands of years before they came, would be there long after they were gone.

We turned then and paddled back, drifted along listening to the loons and watched the sunset melt into the darkness of the ridges. The thunderhead had climbed high and was pink and white and silvered along its edges. As it moved toward the east, it changed

to rose and mauve and then to blood red and purple. The west was now in full color and the water as well, and the spruces etched themselves against the horizon. In the east a low bank of cloud was brightening along its upper edge. We would have to hurry if we were to see the moon rise, so sped across the open water to the point, ran up the slope to the watching place above the campsite. There on the rounded knob with its corydalis and caribou moss, we settled down to wait. The cloud began to glow and then the first shining rim of the moon sliced through it. Swiftly it was out and full, great and golden and pulsating. The beach was silver now with a path of light that reached out tremulously toward the point. Behind us the west was still alive and the water opalescent, but soon the path of the moon would cut across it and its purple turn to silver and then to black. The point which curved slightly toward the south now held the glistening bay in the crook of its arm.

We watched for an hour until the moon was bright enough to guide us down the trail to the beach. Its light

filtered through the pines, and the aspen were traceries of black on silver. In the bay itself, it was dark and no moon showed above the cedars that crowded close. I touched a match to a shred of birchbark, and the little fire that was laid there waiting for this, night leaped into the dark. I fed the flames and they burned as only cedar can, bright and yellow, spitting sparks high above them. We had brought the tea pot and a doughnut for dessert, browned it over the coals and drank a cup of tea as a toast to the new campsite and to the night.

An hour later we were in our bags watching the moon come through the tops of the pines and listening to the lapping of waves against the rocks. The last I remembered was the silhouette of a gnarled little pine against the moon. No one, I thought, must ever touch that tree, no one ever change its twisted black against the sky. What storms it had withstood, how bravely it flaunted its few clumps of needles, how it had fought over the years for the right to live, thrusting its roots deep into the cracks of granite

(Continued on page 13)

"It was very quiet there, and suddenly we realized not a word had been spoken since we landed. The point was as hushed and undisturbed as though we had paddled all day and were far to the north."

U. S. Forest Service



Harlan Page Kelsey (1872-1958)

A GREAT conservationist died on July 28, 1958 at his New England home. He was Harlan Page Kelsey of Boxford, Massachusetts. Head of one of the largest nursery enterprises in the country, his interests extended far beyond the boundaries of his business. He was an outstanding horticulturist, a writer on natural history topics, a talented landscape architect, a planner of national parks, a mountaineer, a worker in the conservation of natural resources, and a far-sighted leader in protection of historic sites.

He was a big man physically and possessed of civic interest, unselfish devotion to causes in which he believed, enthusiasm and vitality to carry out his projects regardless of obstacles, and wisdom to guide aright his energies and those of his associates. Add to all these fine qualities a delightful personality with great capacity for abiding friendship, and we have the man to match the mountains east and west that he loved.

Born in Pomona, Kansas, Harlan Kelsey was taken as a child to the highlands of North Carolina where he grew to manhood. He later engaged in business in New England, where he was soon widely known, especially in Boston, Salem, and neighboring communities, for his participation in public affairs and generous expenditure of his time and talents.

As a youth in North Carolina he was an ardent student of natural flora of the region. He became familiar with the mountains for miles in every direction from his home. While still a young man he became President of the Appalachian Mountain Club. It was inevitable that he would devote his life to living and working with plants and within the range of landscape architecture, utilizing them in beautifying public and private grounds and estates.

As a naturalist and horticulturist, he delved deeply into the science of biology with special emphasis on botany. He was



one of the authors of the monumental work, "Standardized Plant Names," still an authority in its field. This was a highly technical and very useful encyclopedia, but he also wrote extensively and skillfully for popular consumption on plants and their characteristics, habitats and importance in park and estate planning and development.

Nearly forty years ago, Mr. Kelsey became interested in national parks. With Frederick Law Olmsted, the famous landscape architect, and Desmond Fitzgerald, formerly President of the American Society of Civil Engineers, he visited Yellowstone Park after World War I just as irrigationists were making a desperate fight to secure the right to build dams, canals and other exploitive works in the great old park. The studies these three men made enabled them to add great strength to the forces supporting the National Park Service in its struggle against the would-be invaders. From his Yellowstone trip onward, Mr. Kelsey was a dedicated national park man.

Shortly after this western excursion, the movement for the creation of national parks in the east and south was initiated. Harlan Kelsey had long

dreamed of a great national park in the Southern Appalachians, which he had known as a boy. He tendered his services to Secretary of Interior Hubert Work, as a consultant, assuming that a serious effort would be made to establish one or more eastern national parks. There was only one small park in Maine—Acadia—which had been given to the Federal Government by a group of public-spirited citizens.

The Secretary meant business, and in March 1924 proceeded to name a committee to study all the regions where sizeable parks might be established. Harlan P. Kelsey was appointed to a committee of five men, headed by Congressman Henry W. Temple of Pennsylvania. It is no disparagement of the work of the other four committee members to say that Mr. Kelsey's knowledge of the eastern mountains made him the natural leader of the search for areas possessing features so outstanding as to make them worthy of national park status.

The results of this committee's survey are well known. The Great Smoky Mountains in North Carolina and Tennessee, so familiar to Mr. Kelsey in the travels of his youth, and a section in the Blue Ridge of Virginia, were selected; later the Mammoth Cave of Kentucky was placed on the program. Congress, by the Act of February 21, 1925, approved the recommendations and authorized the Secretary to determine the boundaries of two new national parks—Great Smoky Mountains and Shenandoah.

The Secretary was also authorized to appoint a commission to aid in carrying out the purposes of the Act. He appointed the same men who had served on the earlier committee, all to continue to serve without compensation. The boundary designation was an arduous and difficult task, but was quickly accomplished, and Congress approved the commission's proposals in an Act signed March 22, 1926. Thus

the three great eastern parks were authorized and outlined. There remained the task of acquiring the lands, which had to be done by the states. In this the commission was very helpful, and here Mr. Kelsey's vast knowledge of the terrain of the designated park areas was invaluable. The work of the commission was completed in 1930, and this body of able men was dissolved.

His next move in the direction of establishing national park system areas was in the realm of historic preservation. For many years he had been deeply interested in the historic sites and structures of Salem, Massachusetts. He had lived in that community for many years and knew intimately every feature of the old city and its environs. He sought to save Derby Wharf and its associated structures.

This he accomplished by energy and diplomacy. He brought the National

Park Service officials and local friends of the project into a cooperative program to achieve his objective. Today, the Derby Wharf, the old Custom House, and other historic structures compose one of the most interesting historic members of the national park system.

Many honors were accorded Harlan Kelsey in many parts of the country. None were cherished by him more than the beautiful illuminated scroll presented to him at a 1940 banquet of the past presidents of the American Association of Nurserymen. The following is the inscription on this scroll:

As a tribute to his outstanding accomplishments in the fields of Horticulture, Landscape Architecture, Forestry and Conservation; his pioneering work in city planning; his devotion to honest public service; his unselfish sacrifices in the fields of National, State, and Municipal Park Development and Plant Nomen-

clature; his enrichment of American gardens through his many introductions of new plants.

Throughout a full and busy career, this public benefactor has freely given of his time, energy and resources, that the public welfare be served. Horticulture and all related fields will forever be indebted to him for his contributions to their advancement.

May this testimonial serve as public acknowledgment of these accomplishments and of the high regard of those who have been privileged to know and work with him.

—Horace Marden Albright.

Mr. Albright is president of United States Potash, a former director of the National Park Service, a trustee of the National Parks Association and a longtime friend of the national parks. His twenty years of national park administration—including ten years as superintendent of Yellowstone National Park—eminently qualify him to tell of Mr. Harlan's contributions to the field.

BEARBERRY LEDGE

(Continued from page 11)

and greenstone beneath it, holding fast and desperately there as the storms from the northwest tried to tear it from its mooring.

Several tall and beautiful pines stood in the little valley at the base of the point. While stately and magnificent themselves, they had not the character of the small one just above, none of the hardness that typified the whole Canadian Shield. The Shield that covers most of the north with volcanic rock is unyielding and ancient, means muskeg and forest, and cold and storm, and violent roaring rivers. It has spirit and challenge, and the little pine was the embodiment of it all.

I awoke during the middle of the night and lay there watching the stars. They were bright and close, and Mars hung like a lantern in the east, and I could see the Pleiades and Cassiopeia, the Big Dipper and a million more, and the Milky Way lying across the sky like a great stippled roadway paved with countless pinpoints of light.

A loon called, one long mournful note, and a bird cheeped plaintively from the Indian plum back of the campsite. The whitethroat started its long thin note bravely, then stopped

in the middle as though suddenly realizing it wasn't daylight after all, but only the light of the moon.

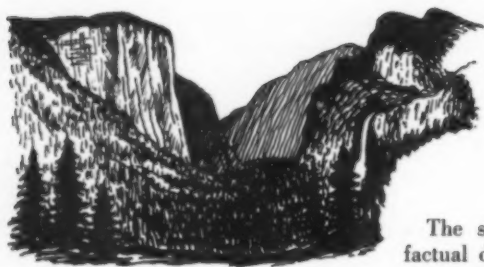
Then as I lay there, I was conscious of a sound I had forgotten, the soft rushing of the rapids in the Burnside River a mile to the south. Years before in the dead of winter I had come up the river and skirted the open water, but had forgotten it was close enough to the point so it could be heard on a quiet night. At times the sound seemed to ebb and flow, then disappeared entirely. But there was no mistake, we had bought a rapids with the point, music that would come to us in the quiet of the night when a soft south wind was there to carry it. Someday we would take the canoe and paddle down there, explore the rapids again and push through the rice beds just below.

We were up just as the sun was peeking over the hill in back of the beach. The moon was far in the west, had lost its whiteness and turned again to orange. The birds were in full song and a flock of loons chased each other madly across the water. Instinctively I looked toward the river mouth, and there they were, the mists, the galloping white horses of all river mouths in the north beginning their run toward the open range of the lake.

We watched them with joy, for this

we had not counted on, something extra that not all campsites have, only those near the mouths of rivers or deep marshy bays. We walked to the top of the point, and there in the bay were the horses too, pink and white in the light of the rising sun. It was warm, so we plunged in and swam through the mists to the beach and back again and had our breakfast watching them disappear as the sun climbed high. A voyageur's breakfast was ours, bread and fried bass, coffee and a handful of blueberries picked off the rocks behind us. How good to sit there in the sun and bask after our swim, how rich the smell of coffee in the morning, how sweet the fish we had caught among the islands.

We had spent our first night on the point, dedicated it to all the campsites we had known, to all the memories of wilderness expeditions of the past. We had watched a sunset and a moonrise too, had seen the stars and the silhouette of the little pine against the moon. We had heard a rapids far off and the lap of waves again and the midnight call of a startled whitethroat. We had watched the horses of the mists and enjoyed a breakfast that would have gladdened the heart of any traveler in the bush. The bearberry ledge of Listening Point was a campsite we would love and remember always. ■



Conservation News Briefs

National Parks and Monuments

Using the slogan "You CAN Take Them With You," a Sierra Club work party last summer visited a trail center in Sequoia-Kings Canyon National Parks and gathered and smashed 26,000 cans left by campers. These three tons of tin were then hauled by the packer to the roadend dump. The twenty-eight volunteer can pickers—men and women from the professions and business, as well as college and high school students—worked in the land of *The Last Flower*, the heavily visited and recreationally scarred territory eloquently described by Christopher Koch (NATIONAL PARKS MAGAZINE, April-June 1958).

The crew implemented the Sierra Club's new anti-litter policy that advises campers to carry out of the wilderness all their trash that does not burn on the campfire. The club had rejected the "bury and hide" procedures when studies revealed that meadow trash holes and the vast accumulation of rubbish in the high country were impairing the landscape's esthetic and ecological value.

—Fred Eissler.

Additional field studies of the area proposed as the Great Basin Range National Park will be made by the National Park Service Region Four office at San Francisco rather than Region Three at Santa Fe, New Mexico, according to an October 1958 news release from the Great Basin Range National Park Association. This information was obtained from a September 5, 1958, letter from E. T. Scoyen, acting director of the National Park Service, to Senator Alan Bible of Nevada. The cooperation and participation of the U.S. Forest Service has also been requested.

The study is expected to provide factual data, an evaluation of the region's worth as a national park, and recommendations for kinds of development. The letter concludes: "You understand, of course, that we can make no commitment at this time that the proposal will be found supportable by this Service, the Advisory Board on National Parks, Historic Sites, Buildings and Monuments, or the Secretary of the Interior. The data to be compiled however, should provide the basis on which the merits of the proposal can be considered by all concerned."

General Conservation

Withdrawal of approximately 23,096 acres of public lands for protection and preservation of scenic and recreation areas adjacent to Oregon's Rogue River and its tributaries was announced in September by the Department of the Interior. Some of the lands are within the Siskiyou National Forest, others are Oregon and California Grant lands, and the remainder are public domain. According to the Department, the withdrawal "will permit the maximum amount of multiple-use development of the lands consistent with the primary purposes of the withdrawal."

A paper blockade of letters written by conservation-minded Ohioans seems to have staved off construction of a proposed highway through 1700 acres of natural areas and parks in the southwest part of Ohio.

Threatened by the proposed 300-foot, dual-lane limited-access highway were Glen Helen, a 1000-acre outdoor laboratory owned and operated by Antioch College; John Bryan State Park, containing part of Clifton Gorge, one of Ohio's most remarkable natural areas, and five youth camps, serving Boy and Girl Scouts, 4H clubs, public schools and a state orphans' home.

Dr. Kenneth W. Hunt, Glen Helen director and professor of biology at

Antioch College, credits hundreds of letters of protest written to Gov. William C. O'Neill with the Governor's later directive to the highway department to find an alternative route outside the area. As Dr. Hunt points out, "The new forty-billion-dollar federal highway program can be a disastrous blessing if it is allowed to disrupt our few remaining remnants of native America."

Porcupine Controversy Cools

The heated controversy over a prospective copper mining lease in Michigan's Porcupine Mountains State Park cooled down shortly before the January 9 Conservation Commission hearing, when the Bear Creek Mining Company suddenly withdrew its request to lease 933 acres of the wilderness park. The company actually was merely beating the commission to the punch in that four of the 7-man group had publicly stated their opposition to the lease. While two of the Conservation Department's Division heads had come out in favor of the mining, they did place restrictive clauses in the lease which were deterring factors. Most important, however, were the opposing citizen groups who foresaw the dangerous precedent the lease would have set for all parks.

CORRECTION

The two sentences on page 11 in the article *Katmai—A Wilderness to be Guarded* in our January-March 1958 issue which imply that mining of all minerals is now permitted in Katmai National Monument should be corrected. The legislation which would have permitted all-inclusive mining activity was not enacted. The concurrent legislation which was enacted provides for removal of deposits of pumice along the shores of Shelikof Strait in Katmai National Monument, Alaska for a period of fifteen years (until April 15, 1969).

The Editor's



Bookshelf

LISTENING POINT, by Sigurd F. Olson. Alfred A. Knopf, New York. 1958. 243 pages. 28 chapter illustrations by Francis Lee Jaques. \$4.50.

Just as *Seven Star Superintendent* "Boss" Pinkley "picked a good ruin and sat down by it," Sigurd Olson picked a glaciated spit of rock in the Quetico-Superior country of Minnesota and wrote about it. But he did much more than just write. For interwoven in the book of natural history of a piece of land is human history, geological history and even legends of early man.

"I named this place Listening Point," says the author, "because only when one comes to listen, when one is aware and still, can things be seen and heard. Everyone has a listening-point somewhere. It does not have to be in the north or close to the wilderness, but some place of quiet where the universe can be contemplated with awe. The chapters that follow are simply the stories of what I have found on my particular point of departure. The adventures that have been mine can be known by anyone."

Each of the twenty-seven chapters which follow the first is a short story in itself; yet through its relationship to "the point," each becomes an integral part of this simple, discerning story of man and his environment. Through a vein of rose quartz at the tip of Listening Point, Mr. Olson interprets the geological history of the planet; from an old pine stump, the ecological succession of the plant kingdom; from an Indian legend which surrounds the point, he conveys the story of the dreams of mankind.

"Bearberry Ledge" (see page 10 of this issue) records the lasting impressions of a wilderness campsite gathered from his first night on "the point." "Cradle-Knolls" is a pleasant, yet penetrating, short-course in ecology; anyone having difficulty comprehending the ecological concept of "climax vegetation" need only read these eight pages.

The chapter on "The Portage" includes one of many statements of the values lost when civilized man tries to take the "wild" out of "wilderness":

"To straighten out the bends and loops (of the trail) that had become a part of it because of obstacles avoided, to remove all natural hazards and even to mark it too well would have taken something from it, just as an old and winding road changes in character when all the curves are eliminated in the interest of speed."

Listening Point offers as much enjoyment to the fortunate few who will soon embark on a wilderness expedition as to those who must content themselves with an armchair view. For, as the author says, everyone "will gain comfort from knowing far horizons are there."

—B. M. K.

GRAND CANYON, TODAY AND ALL ITS YESTERDAYS, by Joseph Wood Krutch. Published by William Sloane Associates, New York. 1958. 276 pages. Maps. \$5.

In his usual thought-provoking manner, Dr. Krutch explains why Arizona's Grand Canyon is such a great source of inspiration and why its solitude and peaceful atmosphere remain, in spite of the enormous throngs of people that visit it every year. At the same time he presents to the reader a wealth of scientific information.

From the geological story of the canyon and the surrounding high mountain mesas, you will get a clearer understanding of your own locale and become more keenly aware of the age of this planet Earth.

Chapter 12, "The Balance of Nature," will particularly interest the student of wildlife management as well as the philosopher. It presents a strong argument for the Schweitzer concept of "reverence for life." It emphasizes man's disastrous impatience with the natural processes and his obvious inclination to pay little heed to past experiences. As an example, Krutch cites the continuing

practice of predator control aimed at providing more targets for hunters rather than at increasing the vigor of the wildlife population.

While the entire book is an eloquent plea for the preservation of one of nature's masterpieces, it is the last chapter that will attract the attention of conservationists. Here Krutch is at his best. It should be required reading for all persons administering public lands primarily set apart for their scenic appeal.

—J. F. C.

A Quick Glance at . . .

BECKONING LANDFALL, by Erick Berry. The John Day Company, New York. 1959. 192 pp. \$3.50.—One of a series of novels for youngsters on the more exciting of our national park histories, written in order to fire their enthusiasm for conservation. This story is built around the fight against the lumbermen who threatened beautiful Mount Desert Island, which was saved to become part of Maine's Acadia National Park.

PERSPECTIVES ON CONSERVATION. Edited by Henry Jarrett. The Johns Hopkins Press, Baltimore. 1958. 260 pp. Index. \$5.—23 essays by some of the country's foremost thinkers in the economics, resources and conservation fields, presented at the Resources for the Future Forum in early 1958. These experts critically appraise the conservation movement since the time of Theodore Roosevelt's first Governor's Conference on Resources in 1908, and seek thereby to find new approaches to the problem, as they project it 50 years into the future.

CONSERVATION IN AMERICA, by Dorothy Childs Hogner. J. B. Lippincott Company, Philadelphia. 1958. 240 pp. Index and directory to organizations in conservation field. \$3.75.—Written for students of conservation, age 13 and up. An interesting story of the early disregard for our wildlife and natural resources, the effects of which made conservation necessary. The second half of the book is devoted to what is now being done by private and public groups to remedy the situation.

AMERICA'S NATIONAL PARKS, by Nelson Beecher Keyes. Doubleday & Company, Inc., New York. 1957. 256 pp. 33 color and 494 black and white photographs. 5 maps. \$7.50.—Pictures of each of our 29 parks and a select group of Canada's parks with a one page geological or descriptive history of each park. Page size 5½ x 8½ inches.

NEW MEMBERSHIP RATES

Membership dues will be increased beginning April 1, 1959. The new rates will be: \$5 annual, \$8 supporting, \$15 sustaining, \$25 contributing, \$100 life with no further dues, and \$1000 patron with no further dues. The educational rate for school and library subscriptions will be \$4 a year. All dues, bequests and other contributions to the Association are deductible from your federal taxable income.



LETTERS TO THE EDITOR

Rainbow Bridge

Your review of the problem of protection of Rainbow Bridge National Monument from the huge reservoir in Glen Canyon covered most of the points extremely well. Two points, however, may be worth further clarification.

First of all, from figures on flow of the Colorado River compiled by the U. S. Geological Survey, we have discovered that the flow of the river during certain periods in the past has been enough to fill this reservoir completely within 15 or 16 months and still have enough water left over for the needs of the users downstream. It is not often that this has happened, but since it *has* happened, it *may* happen again *immediately after the completion of the dam.*

The protective structures are in themselves formidable structures, including a restraining dam 100 to 150 feet high. Since the historic flow of the river requires that they be completed very shortly after the completion of the Glen Canyon Dam, we cannot wait until the main dam is completed, and, as you said, "the waves of Glen Canyon reservoir inundating the hoped-for sites for the protecting dam before excavation and construction gets safely underway." Their construction must be simultaneous with that of Glen Canyon Dam, the cofferdam for which has just been or is about to be begun at this time. This is implied in the recent Federation of Western Outdoor Clubs resolution on the protection of Rainbow Bridge National Monument.

There is a problem of access to the area for construction crews. Both (ways) have disadvantages. One is by water, when the Glen Canyon Dam is complete and the waters of the reservoir are lapping at the protective sites and perhaps at the buttresses of the great span itself. To those of us who know the area, this would be a frightful risk. The other would be by road across an Indian roadless area to Aztec Canyon. Even though the Navajos are opposed to the exist-

ence of this roadless area . . . few conservationists would favor construction of this road except as a last resort. Unfortunately, that is what it appears to be. Given the choice of building this road versus the serious risk to Rainbow Bridge National Monument which would necessarily result from the other plan, there can be only one choice.

The other point is one which has not been given much thought, but may be a serious consideration. *What if the current studies do not show any way of protecting Rainbow Bridge National Monument which is acceptable to conservationists?*

This is far from impossible. We should remember that Glen Canyon Dam was authorized only if Rainbow Bridge National Monument was "precluded from impairment." We should also remember that construction on the dam has not progressed beyond a point where it can be halted pending additional studies. We have so little time, and so much to lose.

William R. Halliday, Chairman
Conservation Committee
The Mountaineers
Seattle, Washington

I read your article on the Rainbow Bridge controversy (*The Rainbow Bridge Debate* in the October-December 1958 issue) with a great deal of interest, and felt that you presented the attitude of those of us who oppose the bulkhead dams very fairly.

Recently our Desert Protective Council has taken a position which I feel should meet with the approval of all parties to the controversy. We passed a resolution proposing the final decision as to any protective works for the Bridge be deferred until the reservoir is filled and an opportunity given to appraise the issue on the actual conditions as they appear.

Since the water in the Colorado River is subject to an extreme seasonal variation, as is true of all rivers fed by the snows of the Rockies, there would be ample time to go in after the first crest had passed and do protective construction if it is deemed desirable. Actually, only twice in 27 years was Lake Mead filled to the sluiceways and we may assume that the Glen Canyon reservoir will seldom hold enough water to back up beyond the junction of Bridge and Forbidden Canyons.

Engineers with whom I have discussed the matter agree with me that the blasting necessary to build two bulkhead dams in the vicinity of Rainbow would constitute a greater hazard to the Bridge than would any seepage water which might

penetrate the sandstone at the base of the Bridge.

It has been the proposal of the Reclamation Bureau engineers that the heavy equipment necessary for protective dams be floated to the site. If the dams must be built I think every conservationist should concur in this plan, for much of the charm of Rainbow is the setting in which it is located, and the blasting and bulldozing of roads in there to take in the cranes and steam shovels and other equipment would completely destroy the wilderness aspect of the area.

Unfortunately, much of the clamor for protection of the Bridge is coming from rugged conservationists who have never been there. Their fear is that a precedent will be established. To me, the preservation of the Bridge and the lovely wilderness setting of its location is many times more important than any precedent.

I may be wrong. You may be wrong. Hence the proposal that any final decision be deferred until an appraisal can be made during the first crest of the reservoir seems to me entirely reasonable.

Randall Henderson, Editor
Desert Magazine
Palm Desert, California

● Bureau of Reclamation engineers have assured us that in their opinion the "light" blasting required for the dams and the "normal" blasting required for the tunnel would not "constitute a hazard to the bridge"—a half-mile away. Nevertheless, they plan to install seismic equipment at the bridge to control the size of each charge and thus assure the protection of the bridge.

—Editor.

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Comments on Architecture

Many people visit the national parks to gain relief from "hustle-bustle, brick and concrete" and "cityitis" in general. Many of us would like a complete return to "Swiss Chalet" style construction. We are all for steel and concrete. It is the practical way to build. But keep it on the inside and disguise it.

Jon K. Purvis
Indianapolis, Indiana

In your July-September 1958 issue, Mr. William Vogt expresses his horror at the fruits of "Mission 66" at the Cape

Hatteras seashore area and at Everglades. I knew both places before "improvement" began. I agree thoroughly with Mr. Vogt's appraisal of what has been done. At the seashore area I got the impression that some of the Park Service people themselves were thoroughly ashamed of the brightly-colored, modernistic buildings which now mar this beautiful dune country. Everglades, with its many, many plastic boats, its yacht basin, and concessionaires' shops, is no doubt useful and pleasing to many people, but it isn't national park.

C. Francis Beatty
Pawling, New York

Slides—Photographs

When I sent our last check for dues I mentioned I would soon send a list of slides I have that are extras. These are all top quality slides in color and focus. We thought they might be of use.

Mrs. Glen Maxwell
Effingham, Illinois

● Many thanks for this offer. We shall be glad to receive such materials from any photographer-members.

—Editor.

Clingman's Dome

● On the inside front cover of this issue is a description and a drawing of the unique "sky-post" scheduled for construction on Clingman's Dome in Great Smoky Mountains National Park in Tennessee and North Carolina. This description together with several architect's drawings and a conference with the information and architecture staff of the Park Service stimulated the following letter to Director Conrad L. Wirth. This letter—dealing with a subject of public importance—sets forth your Association's views on the project. Director Wirth has been invited to reply in the next issue.—Editor.

Many friends of the National Park Service will be deeply distressed by the announcement of the construction of the bizarre, modernistic observation tower on Clingman's Dome in Great Smoky Mountains National Park.

The National Parks Association greatly regrets the necessity of protesting this construction at this late date after the letting of contracts has already been announced. Had this project been announced to the public through your brochure on Mission 66 for the Great Smoky Mountains National Park, or had it been mentioned at, say, one of your press conferences, conservationists could have explained their views to you before the decision became irrevocable.

We can only say to you that if this project is a foretaste of things to come, then this protest is likewise the first in a long series. This structure is objectionable because:

It is *flashy* and *conspicuous* and does not blend into the landscape; park architecture, while it must adhere to standards

of true beauty, should hide itself, and should display nature and scenery instead.

It is unnecessarily *large* because of your choice of a long, wide, massive ramp instead of a staircase; in this respect, again, it intrudes on the natural setting.

It is extravagantly *expensive* (\$57,000, according to your release) in comparison with an ordinary fire tower; a substantial 40-foot steel fire tower, not unlike the wooden tower which previously existed at this site, and which can frequently be seen in our national forests, could be built for about \$9,000. . . .

It is *eccentric* and breaks the feeling of time, history and tradition, and of the long ages of nature, which is one of the fine experiences one may enjoy in the Appalachian Mountains.

It is wholly lacking in any feeling for the *frontier* and the *wilderness*, which are such an important part of our national history, and which are so well displayed in our great national parks, including our eastern parks, in their primitive condition.

It expresses *motion* and *speed* in every line, as its dominant values; but park architecture should express the repose and tranquility that people find in great spaces and long views.

It is *urban* in conception, and therefore unsuitable to a natural outdoor region; its unbending concrete and steel verticals and blank surfaces are of the very substance of city streets and office buildings.

It is *mechanical*; it expresses our engineering talents—our ability to balance a platform on a pole; but the mechanical

clutter of modern life is precisely the thing people are trying to escape when they go to the parks.

It expresses technical *power* on the loose; it suggests the Sputniks; man's mastery over nature may be symbolized here, but not his community with nature, a sense of which our parks should be allowed to convey, nor does it suggest any sense of man's potential mastery over himself, so greatly needed in this day of technical power, to which the solitudes and quietudes of our parks can contribute.

This is a Coney Island facility, a Steeplechase Pier feature, and much too strongly suggestive of a roller coaster at a commercial playground.

Incidentally, as we understand it, this structure is really not a fire tower at all, and your fire wardens do not consider a fire tower necessary here; this is primarily an observation tower.

The Park Service should put its efforts into better things than noisy architecture. It should give more attention to the restoration of wilderness areas which have been destroyed by commercialization in the past, . . . and to its interpretive services.

We can only repeat our statement of regret that there was no opportunity for adequate public consideration before these decisions were made and to request reasonable public notice if similar projects are under consideration elsewhere.

Anthony Wayne Smith
Executive Secretary

December 29, 1958

BACK COVER: A winter view of the road between Giant Forest Village and Moro Rock in Sequoia National Park, California. Photograph by Harold C. Bradley. See *Roads in Our National Parks* in this issue.



